Exhibit J

WCDMA
FOR UMTS

Radio Access For Third Generation
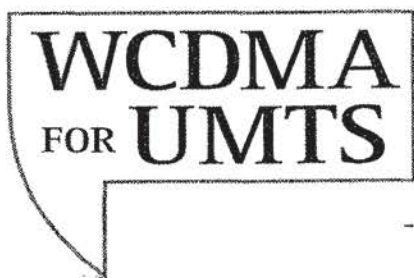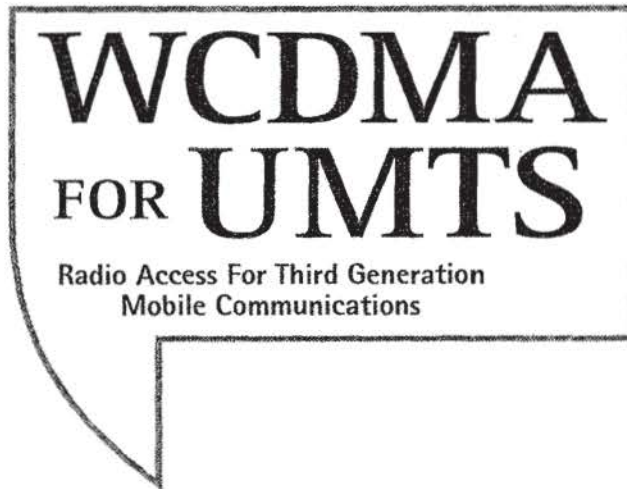Mobile Communications

Edited by Harri Holma
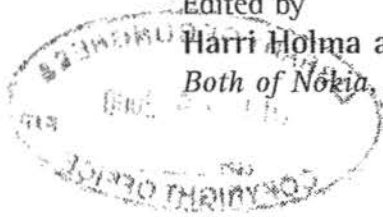and Antti Toskala

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WCDMA FOR UMTS

Radio Access For Third Generation
Mobile Communications

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Chichester · New York · Weinheim · Brisbane · Singapore · Toronto

7.7.3.1   Broadcast of System Information

The broadcast system information originates from the Core Network, from RNC and from Node Bs. The *System Information* messages are sent on a BCCH logical channel, which can be mapped to the BCH or FACH transport channel. A System Information message carries *system information blocks* (SIBs), which group together system information elements of the same nature. Dynamic (i.e. frequently changing) parameters are grouped into different SIBs from the more static parameters. One System Information message can carry either several SIBs or only part of one SIB, depending on the size of the SIBs to be transmitted. One System Information message will always fit into the size of a BCH or FACH transport block. If padding is required, it is inserted by the RRC layer.

The system information blocks are organised as a tree (Figure 7.12). A *master information block* gives references to a number of system information blocks in a cell, including scheduling information for those system information blocks. The master information block is sent regularly on the BCH and its scheduling is static. In addition to scheduling information of other SIBs, the master information block contains only information of supported PLMN types (which can be GSM and/or ANSI-41) and PLMN identity information. The system information blocks contain all the other actual system information. Some system information blocks may contain also references to other system information blocks, including scheduling information for those blocks.

The SIBs containing frequently changing parameters are read by the UE regularly on every repetition occasion, which is described by the scheduling information in the master information block or in other SIBs.

For the other SIBs (with more 'static' parameters) the master information block, or the 'parent' SIB, contains, as part of the scheduling information, a 'value tag' that the UE compares to the latest read 'value tag' of this system information block. Only if the value tag has changed after the last reading of the SIB in question does the UE re-read it. Thus, by monitoring the master information block, the UE can notice if any of the system information blocks (of the more 'static' nature) has changed. UTRAN can also inform of the change in system information with *Paging* messages sent on the PCH transport channel (see Section 7.7.3.2) or with a *System Information Change Indication* message on the FACH transport channel. With these two messages, all UEs needing information about a change in the system information (all UEs in the Cell_FACH, Cell_PCH and URA_PCH states) can be reached.

The number of system information blocks in 3GPP Release-99 is one master information block plus 16 SIBs. One of the SIBs (#14) contains only TDD-specific information, one (#13) is dedicated for ANSI-41 information and another (#15) for LCS related information.

7.7.3.2   Paging

The RRC layer can broadcast paging information on the PCCH from the network to selected UEs in a cell. The paging procedure can be used for three purposes:

- At core network-originated call or session setup. In this case the request to start paging comes from the Core Network via the Iu interface
- To change the UE state from Cell_ PCH or URA_PCH to Cell_FACH. This can be initiated, for example, by downlink packet data activity.